

# 5AV8

## Medium-Mu Triode— Sharp-Cutoff Pentode

9-PIN MINIATURE TYPE  
With Heater Having Controlled Warm-Up Time

### GENERAL DATA

#### Electrical:

Heater, for Unipotential Cathodes:

Voltage (AC or DC) . . . . .	4.7	volts
Current . . . . .	$0.6 \pm 6\%$	amp
Warm-up time (Average) . . . . .	11	sec

Direct Interelectrode Capacitances:<sup>a</sup>

#### Triode Unit:

Grid to plate . . . . .	1.5	$\mu\mu\text{f}$
Grid to cathode and heater. . . . .	2	$\mu\mu\text{f}$
Plate to cathode and heater . . . . .	0.34	$\mu\mu\text{f}$

#### Pentode Unit:

Grid No.1 to plate. . . . .	0.04 max.	$\mu\mu\text{f}$
Grid No.1 to cathode & grid No.3 & internal shield, grid No.2, and heater. . . . .	7	$\mu\mu\text{f}$
Plate to cathode & grid No.3 & internal shield, grid No.2, and heater. . . . .	3	$\mu\mu\text{f}$
Triode grid to pentode plate. . . . .	0.005	$\mu\mu\text{f}$
Pentode grid No.1 to triode plate . . . . .	0.006	$\mu\mu\text{f}$
Pentode plate to triode plate . . . . .	0.045	$\mu\mu\text{f}$

#### Characteristics, Class A<sub>1</sub> Amplifier:

	Triode Unit	Pentode Unit	
Plate Supply Voltage. . . . .	200	200	volts
Grid-No.2 Supply Voltage. . . . .	—	150	volts
Grid-No.1 Voltage . . . . .	—6	—	volts
Cathode Resistor. . . . .	—	180	ohms
Amplification Factor. . . . .	19	—	
Plate Resistance (Approx.) . . . . .	5750	300000	ohms
Transconductance. . . . .	3300	6200	$\mu\text{mhos}$
Plate Current . . . . .	13	9.5	ma
Grid-No.2 Current . . . . .	—	2.8	ma
Grid-No.1 Voltage (Approx.) for plate $\mu\text{a} = 10$ . . . . .	—19	—8	volts

#### Mechanical:

Operating Position. . . . .	Any
Maximum Overall Length. . . . .	2-3/16"
Maximum Seated Length . . . . .	1-15/16"
Length, Base Seat to Bulb Top (Excluding tip). . . . .	1-9/16" $\pm$ 3/32"
Diameter. . . . .	0.750" to 0.875"
Dimensional Outline . . . . .	See General Section
Bulb. . . . .	T6-1/2



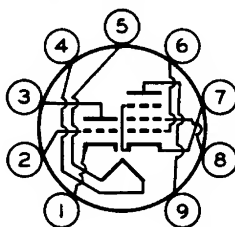
RADIO CORPORATION OF AMERICA  
Electron Tube Division  
Harrison, N. J.

DATA  
7-61

# 5AV8

Base. . . . . Small-Button Noval 9-Pin (JEDEC No.E9-1)  
 Basing Designation for BOTTOM VIEW. . . . . 9DZ

Pin 1 - Triode  
 Cathode  
 Pin 2 - Triode  
 Grid  
 Pin 3 - Triode Plate  
 Pin 4 - Heater  
 Pin 5 - Heater  
 Pin 6 - Pentode  
 Grid No.1



Pin 7 - Pentode  
 Cathode,  
 Pentode  
 Grid No.3,  
 Internal  
 Shield  
 Pin 8 - Pentode  
 Grid No.2  
 Pin 9 - Pentode Plate

## AMPLIFIER — Class A<sub>1</sub>

### Maximum Ratings, Design-Center Values:

	Triode Unit	Pentode Unit	
PLATE VOLTAGE . . . . .	300 max.	300 max.	volts
GRID-No.2 (SCREEN-GRID) SUPPLY VOLTAGE. . . . .	-	300 max.	volts
GRID-No.2 VOLTAGE . . . . .	-	See Grid-No.2 Input Rating Chart at front of Receiving Tube Section	
GRID-No.1 (CONTROL-GRID) VOLTAGE:			
Positive-bias value . . . . .	0 max.	0 max.	volts
GRID-No.2 INPUT:			
For grid-No.2 voltages up to 150 volts . . . . .	-	0.5 max.	watt
For grid-No.2 voltages between 150 and 300 volts . . . . .	-	See Grid-No.2 Input Rating Chart at front of Receiving Tube Section	
PLATE DISSIPATION . . . . .	2.5 max.	2 max.	watts
PEAK HEATER-CATHODE VOLTAGE:			
Heater negative with respect to cathode. . . . .	200 max.	200 max.	volts
Heater positive with respect to cathode. . . . .	200 <sup>b</sup> max.	200 <sup>b</sup> max.	volts

### Maximum Circuit Values:

	Triode Unit	Pentode Unit	
Grid-No.1-Circuit Resistance: <sup>c</sup>			
For fixed-bias operation. . . . .	0.5 max.	0.25 max.	megohm
For cathode-bias operation. . . . .	1 max.	1 max.	megohm

<sup>a</sup> Without external shield.

<sup>b</sup> The dc component must not exceed 100 volts.

<sup>c</sup> If either unit is operated at maximum-rated conditions, grid-No.1-circuit resistances for both units should not exceed the stated values.

